

## Effectiveness of Psychological Intervention in Management of Postpartum Depression

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### ABSTRACT

**Background:** In order to prevent postpartum depression many primary preventive programs were done. Psychological interventions are thought to be effective in decreasing the incidence of postnatal depression. This study aimed to evaluate the effect of Psychotherapy in treatment of postpartum depression.

**Methods:** An electronic search was obtained in MEDLINE and EMBASE databases with search terms such as psychology, postpartum, depression, intervention, effectiveness. The primary search resulted in 128 studies which have been screened for eligibility. After exclusion of irrelevant, duplicated and review studies, 11 studies were included in the review as they met the inclusion criteria.

**Results:** Psychotherapy decrease the likelihood of postpartum depression and decrease postpartum depressive symptoms, increased awareness, depression reduction, general improvement and psychological health and prevention of postpartum depression, improve depression, functioning and anxiety. Training for health visitors' intervention was found to be cost-effective in reducing the proportion of women at risk. It was only noted that there was no outcome difference between behavioral approach and person-centered approach groups. Health visitor raining was noted to have preventive effect for depression.

**Conclusions:** There is evidence to recommend that interventions carried in pregnancy can be effective in preventing postnatal depression. Interventions are mainly effective when grounded on psychological treatments and provided to women suffering from antenatal depression.

**Keywords:** Psychology, Postpartum, Depression, Intervention, Effectiveness.

### INTRODUCTION

Postpartum depression (PPD) also known as postnatal depression, is a mood disorder that can occur in women associated with childbirth (during the six weeks of the puerperium) <sup>(1)</sup>. Symptoms of PPD include anxiety, irritability, guilt, feelings of extreme sadness, exhaustion, sleep disorders and somatic symptoms that affect the mother, children and the whole family <sup>(1, 2)</sup>. PPD is a global phenomenon that affect large number of women every year. In 2013 about 8.5% –11% of women were diagnosed with depression during pregnancy <sup>(3)</sup>. The exact cause of PPD is unknown, but it thought that combination of physical and emotional factors which play an important role in its etiology <sup>(1, 4)</sup>. PPD has many risk factors such as lack of partner support, single marital status, recent stressful life events, low levels of social support and few number of children. In addition, the previous major depression is considered a risk factor to develop postnatal attack of depression <sup>(5-8)</sup>. Many studies found that mothers who were satisfied with their families are less likely to develop PPD, and the vice versa <sup>(9-11)</sup>. Both counseling and medications are used in the treatment of PPD. selective serotonin reuptake inhibitors (SSRIs) is a drug of choice in the treatment of PPD. Many types of counseling and psychological therapy were used in treatment of PPD such as; cognitive behavioral therapy (CBT), interpersonal psychotherapy (IPT) and psychodynamic

therapy <sup>(12, 13)</sup>. In order to prevent PPD many primary preventive programs were done. Psychological interventions are thought to be effective in decreasing the incidence of postnatal depression <sup>(5)</sup>. Many studies were conducted aiming to evaluate the effect of Psychotherapy in treatment of PPD <sup>(14)</sup>. Interestingly, it was noted that postpartum interventions to prevent and treat PPD were more effective than interventions that done in the prenatal and antenatal periods <sup>(15)</sup>.

The aim of the present systematic review is to assess all randomized control trials that studied the effectiveness of psychological intervention in management of postpartum depression to review the type of the psychological interventions and to examine its effects on patients' outcome. This review will provide evidence-based data that can help doctors to improve their patients' outcome by applying the best evidence treatment modalities.

### METHODS

An electronic search was obtained in MEDLINE and EMBASE databases with search terms such as psychology, postpartum, depression, intervention, effectiveness. The primary search resulted in 128 studies which have been screened for eligibility. After exclusion of irrelevant, duplicated and review studies, 11 studies were included in the review as they met the inclusion criteria. Included studies aimed to assess the effectiveness of psychological interventions in

management of postpartum depression. The data were extracted from included studies in data collection forms demonstrated in table 1.

## RESULTS

Out of the 11 included studies, nine studies were randomized controls trials (RCT), one pilot study and one experimental trial. The total number of patients were 18607 women. Age of the women varies as were reported in 6 studies, with minimum age of 20 to a maximum age of 37.

Edinburgh Postnatal Depression Scale (EPDS) scores was used to measure the outcome of PPD in all included studies. One study used in addition EPDS, the work and social adjustment scale, generalized Anxiety Disorder-7, postnatal bonding questionnaire and social provisions scale. Another study added state-trait anxiety inventory (STAI), clinical outcomes in routine evaluation - outcome measure (CORE-OM) score, 12-item short form health survey (SF-12) and parenting stress index short form (PSI-SF) scores in addition to EPDS to evaluate their patient's outcome. Hamilton depression rating scale (HAM-D) and the beck depression Inventory (BDI) were used too.

Regarding the aggravating factors of PPD studies reported that risk factors of PPD include; single women, lack of support from partner, financial difficulties, assisted reproduction, unplanned pregnancy and history of previous unfavorable obstetric outcome. Financial status, spouse's job and type of delivery (Caesarean section delivery) were other risk factors that reported by the included studies.

Many types of psychological therapy were used in treatment of the included patients. Cognitive-behavioral therapy (CBT) was used in 4 studies. Other interventions include psychotherapy and relaxation training. Cognitive behavioral approach (CBA) and person-centered approach (PCA) were also used as well as training for health visitors (HVs) plus either cognitive behavioral approach (CBA) or person-centered approach (PCA) sessions in treatment of included women. Many other types of psychological treatment were used such as; educational workshops, informational support, encouragement to exercise and to look for social support to exercise, telephone support sessions, psychological treatment sessions, discharge education on postnatal depression and group interpersonal psychotherapy (IPT-G).

Regarding the effectiveness of psychological intervention in management of postpartum depression, this the reviewed studies concluded that; psychotherapy decrease the likelihood of PPD and decrease postpartum depressive symptoms, increased awareness, depression reduction, general improvement and psychological health and prevention of PPD, improve depression, functioning and anxiety. Training for health visitors (HVs) intervention was found to be cost-effective in reducing the proportion of women at risk. It was only noted that there was no outcome difference between the CBA and the PCA groups. Health visitor (HV) training was noted to have preventive effect for depression.

**Table (1): The effectiveness of the different psychotherapy approaches in treatment of post-partum depression**

Study	Study design	Sample size	Mothers Age (Mean age)	Outcome measure	Aggravating factors	Type of psychological intervention	Effectiveness of the intervention
<b>Kozinszky et al.</b> <sup>(16)</sup>	A randomized controlled trial (RCT)	1,719	26 ±4	Edinburgh Postnatal Depression Scale (EPDS) scores	Single women, financial difficulties, lack of support from partner, unplanned pregnancy, and assisted reproduction	Psychotherapy, and cognitive-behavioral therapy and relaxation training	Reduce the likelihood of PPD and reduce postpartum depressive symptoms
<b>Moshki et al.</b> <sup>(17)</sup>	Pre-post experimental design	230	28 +/- 6.39	Edinburgh Postnatal Depression Scale (EPDS) scores	Financial status, spouse's job, and type of delivery	Educational workshops	The intervention lead to increased awareness, depression reduction, and psychological health and prevention of PPD
<b>Morrell et al.</b> <sup>(18)</sup>	A prospective cluster randomized trial	4084	Not reported	Edinburgh Postnatal Depression Scale (EPDS) scores	Not reported	Cognitive behavioral approach (CBA) and person centered approach (PCA)	Reduction in depressive symptoms at six months postpartum

Study	Study design	Sample size	Mothers Age (Mean age)	Outcome measure	Aggravating factors	Type of psychological intervention	Effectiveness of the intervention
<b>Heh SS <i>et al.</i><sup>(19)</sup></b>	A randomized controlled trial (RCT)	500	Not reported	Edinburgh Postnatal Depression Scale (EPDS) scores	Not reported	Informational support	Lower postpartum depression in the controlled group
<b>Daley <i>et al.</i><sup>(20)</sup></b>	A randomized controlled trial	146	31.7±5.3	Edinburgh Postnatal Depression Scale (EPDS)	Not reported	Encouragement to exercise and to seek out social support to exercise	Lower mean EPDS scores than those randomized to usual care only
<b>O'Mahen <i>et al.</i><sup>(21)</sup></b>	A randomized controlled trial	249	Not reported	Edinburgh Postnatal Depression Scale (EPDS), Generalized Anxiety Disorder-7, Work and Social Adjustment Scale, Postnatal Bonding Questionnaire, and Social Provisions Scale	Not reported	Telephone support sessions	Reduce depression, anxiety and improve functioning
<b>Mirabella <i>et al.</i><sup>(22)</sup></b>	A randomized controlled trial	1558	Not reported	Edinburgh Postnatal Depression Scale	Not reported	Psychological treatment sessions	Significant improvements
<b>Shiao-Ming <i>et al.</i><sup>(23)</sup></b>	A randomized controlled trial	200	20 -35	Edinburgh Postnatal Depression Scale (EPDS)	Not reported	Discharge education on postnatal depression	Intervention group were less likely to have high depression scores when compared to the control group at three months postpartum
<b>Morrell <i>et al.</i><sup>(24)</sup></b>	A randomized trial	7649	Not reported	Edinburgh Postnatal Depression Scale (EPDS)	Not reported	Training for health visitors (HVs), PLUS either cognitive behavioral approach (CBA) or person-centered approach (PCA) sessions for eligible women	HV intervention was highly likely to be cost-effective and reducing the proportion of at-risk women. There was no difference in outcomes between the CBA and the PCA groups.
<b>Brugha <i>et al.</i><sup>(25)</sup></b>	A prospective cluster randomized trial	241	31.4 +/- 5	Edinburgh Postnatal Depression Scale (EPDS), Clinical Outcomes in Routine Evaluation - Outcome Measure (CORE-OM) score, State-Trait Anxiety Inventory (STAI), 12-item Short Form Health Survey (SF-12) and Parenting Stress Index Short Form (PSI-SF) scores	Living alone, previous postnatal depression (PND), the presence of one or more adverse life events	Health visitor (HV) training, and cognitive behavioral or person-centered principles.	Universal, enduring preventive effect for depression in women who screen negative for depression postnatally.

Study	Study design	Sample size	Mothers Age (Mean age)	Outcome measure	Aggravating factors	Type of psychological intervention	Effectiveness of the intervention
Reay <i>et al.</i> <sup>(26)</sup>	A pilot study	31	31.8 +/- 6.2	Hamilton Depression Rating Scale (HAM-D), The Beck Depression Inventory (BDI), Edinburgh Postnatal Depression Scale (EPDS)	Not reported	Group interpersonal psychotherapy (IPT-G)	Improve symptom severity for women suffering from postnatal depression

## DISCUSSION

Psychotherapy is thought to be effective in treatment of postpartum depression<sup>(5)</sup>. This meta-analysis combined the outcomes of 11 RCTs that included 18607 women with PPD. The review revealed that psychological interventions are effective in prevention and treatment of PPD.

All included studies used Edinburgh Postnatal Depression Scale (EPDS) scores to diagnose and measure the outcome of PPD treatment<sup>(16-26)</sup>. This means that the results are comparable and can be generalized. Some studies used additional scales such as postnatal bonding questionnaire and social provisions scale<sup>(21)</sup>, state-trait anxiety inventory (STAI), clinical outcomes in routine evaluation - outcome measure (CORE-OM) score, 12-item short form health survey (SF-12), parenting stress index short form (PSI-SF) scores<sup>(25)</sup>, Hamilton depression rating scale (HAM-D) and the beck depression Inventory (BDI)<sup>(26)</sup>.

Compared with the usual methods of treatment or the pharmacological treatment alone, psychological interventions are associated with reduction in the symptoms of PPD and outcome improvement<sup>(16)</sup>. Moreover, it also found to have some preventive effects when it used in educational workshops in prenatal and postnatal periods<sup>(17)</sup>. Prevention of PPD was also noted after using both health visitor (HV) training and cognitive behavioral therapy<sup>(25)</sup>.

Educational workshops added an important effect as it increased the awareness of PPD<sup>(17)</sup>. Psychological interventions have a positive effect in reduction of PPD till six months of follow up<sup>(24)</sup>. Longer duration of follow up maybe needed to evaluate the long-term effects of the psychological interventions in patients with PPD. Regarding the cost of treatment, psychological interventions found to cost effective<sup>(24)</sup>. Statistically significant improvement in anxiety symptoms was noted<sup>(21)</sup>.

PPD has many preventable risk factors as noted in the reviewed studies. Being a single woman and

lack of partner support are important risk factors<sup>(16)</sup>, because pregnancy and delivery are important periods in the women's life in which they need special care. Absence of partner or lack of support during this period is thought to have an important implication in the psychological wellbeing in the antenatal and postnatal periods. Other important risk factor was financial problems, as it causes a lot of stress. Surprisingly, unplanned pregnancy, caesarean section delivery and history of previous unfavorable obstetric outcome were found to be a leading cause to PPD<sup>(16, 17)</sup>. As it is known, pregnancy is a special period, lack of support, unwanted or unplanned pregnancy and bad past obstetric history can be precipitating factors for PPD. Fortunately, all these risk factors are preventable. Manipulation of these risk factors may decrease the possibility of developing PPD over many different ways.

## CONCLUSION

In conclusion, there is evidence to recommend that interventions carried in pregnancy can be effective in preventing postnatal depression. Interventions are mainly effective when grounded on psychological treatments and provided to women suffering from antenatal depression. Prevention of precipitating factors is important and needed to decrease incidence of PPD. There is evidence suggesting that interventions that emphasis on relationships problems may be beneficial. Further studies on prevention of PPD may be needed.

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